A Family of Questions[1]

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I. SIMPLE CLAUSES AND CONTROL INFINITIVAL COMPLEMENTS

GAPPING
(1)   John read books and Mary ~~read~~ magazines
(2)   John wanted to read books and Mary ~~wanted to read~~ magazines
(3)   *John wanted Bill to read books and Mary ~~wanted Bill to read~~ magazines

PSEUDOGAPPING
(4)   Mary hasn't dated Bill, but she has ~~dated~~ Harry
(5)   Kathy likes astronomy, but she doesn't ~~like~~ meteorology
(6)   ?Kathy wants to study astronomy, but she doesn't ~~want to study~~ meteorology
(7)   *Kathy wants Henry to study astronomy, but she doesn't ~~want Henry to study~~ meteorology

QUANTIFIER SCOPE INTERACTION
(8)   At least one student fooled each of the professors
(9)   At least one student has tried to fool each of the professors   Kayne (1998)
(10)   At least one student saw each of these new books
(11)   At least one student has asked to see each of these new books   Kayne (1998)

ACD
(12)   John read everything Mary did (read)
(13)   John wants to read everything Mary does (read / want to read)
(14)   John wants Susan to read everything Mary does (read / *want Susan to read)

RECIPROCAL BINDING
(15)   John and Mary visited each other
(16)   John and Mary want to visit each other
        'Each wants to visit the other'   Higginbotham (1981)
(17)   *John and Mary want Bill to visit each other

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[1] The material here is based, in substantial part, on joint research with Tomohiro Fujii and Norbert Hornstein.

EXTRAPOSITION
(18)   Mary wanted *t* until yesterday a gigantic new car
(19)   ?Mary wanted [to buy *t*] until yesterday a gigantic new car
(20)   *Mary wanted [John to buy *t*] until yesterday a gigantic new car

MULTIPLE SLUICING
(21)   Someone talked about something
        ?but I don't know who about what
(22)   Someone wanted to talk about something
        ?but I don't know who about what
(23)   Someone wanted Mary to talk about something
        *but I don't know who about what
(24)   A certain boy decided to talk to a certain girl
        I forget which boy to which girl   Barrie (2005)

II. FINITE COMPLEMENTS WITH BOUND PRONOUN SUBJECTS

GAPPING
(25)   ?John thinks that he will see Susan and Harry ~~thinks that he will see~~ Mary
                        [Nishigauchi (1998), attributed to an anonymous reviewer]
(26)   "... the clausemate restriction on Gapping is alleveiated by an intervening pronoun."
(27)   *John thinks that Bill will see Susan and Harry ~~thinks that Bill will see~~ Mary
(28)   John$_i$ thinks that he$_i$ will see Susan and Harry$_j$ ~~thinks that he$_{j}$/$_{*i}$ will see~~ Mary
(29)   In particular, the alleviation requires a **bound** pronoun.

PSEUDOGAPPING
(30)   ?*Kathy thinks she should study astronomy but she doesn't meteorology
(31)   *Kathy thinks Henry should study astronomy but she doesn't meteorology

QUANTIFIER SCOPE INTERACTION
(32)   At least one man/some man thinks he's in love with each of these women
                each > at least one   possible   Kayne (1998)
(33)   At least one man/some man thinks Bill's in love with each of these women.
                each > at least one   not possible

ACD
(34)   John$_i$ said he$_i$ read everything Bill$_j$ did (read / ?say he$_j$ read)
(35)   John said Harry read everything Bill did (read / *say Harry read)
(36)   John$_i$ said he$_i$ read everything Bill$_j$ did (read / *say he$_i$ read)

RECIPROCAL BINDING
(37)   John and Mary think they like each other
(38)a   John and Mary think they (that is, John and Mary) like each other.
    b   John thinks that he likes Mary and Mary thinks that she likes John

(39)   *John and Mary think that I like each other (would = Each of John and Mary thinks that I like the other.)

EXTRAPOSITION

(40)   The absent-minded professor$_i$ will say that {he$_i$/*Lucy}'s working, if you press him, on a new molecular compound for flubber   [Jason Merchant, personal communication]

MULTIPLE SLUICING

(41)   ?Each professor$_i$ said he$_i$ was working on a different one of these topics, but I can't remember which on which one   [Jason Merchant, personal communication]

(42)   *Each professor said Susan was working on a different one of these topics, but I can't remember which on which one

(43)   A certain boy$_i$ said he$_i$ would talk to a certain girl
         I forget which boy to which girl   Barrie (2005)

III. 'FAMILY OF QUESTIONS' READINGS

(44)   What did everyone buy for Max

(45)   On the May (1985) account, <u>everyone</u> undergoes QR to a position close enough to <u>What</u> that the former can scopally interact with the latter. The 'family of questions reading' is the result of <u>everyone</u> taking wider scope.

(46)   Who do you think everyone saw at the rally

(47)   This also has the family of questions reading, so May claims that here too QR can raise <u>everyone</u> close enough to the wh-operator.

(48)   However, as observed by Williams (1986) among others (and see (33) above), QR out of a finite clause is not usually possible:

(49)   Someone thinks everyone saw you at the rally

(50)   Interestingly, Larson and May (1990) make the same claim as Williams, based on:

(51)   Someone believes (that) everyone is a genius

(52)   Further, as pointed out by Sloan (1991), the May (1985) account falsely predicts the possibility of a family of questions reading for (53), which had already been observed by May (1977) to be impossible:

(53)   Who did everyone say that Bill saw

(54)   On the face of it, we seem to have a weird **anti**-clause-mate effect. In (46), which allows the family of questions reading, <u>everyone</u> is in the embedded clause far from the <u>wh</u>, while in (53), which disallows the reading, <u>everyone</u> is in the matrix clause along with the <u>wh</u>.

(55)   However, Sloan (1991) and Lasnik and Saito (1992) argue that it really is a <u>locality</u> effect, the relevant relation being between the quantifier and the **trace** of the <u>wh</u>.

(56)   In (44) and (46) <u>everyone</u> and wh-trace are clause-mates; in (53) <u>everyone</u> and wh-trace are in separate clauses.

(57)   Sloan suggests that, at least in these constructions, the wh-trace is a sort of anaphor whose binder must be the quantifier.

(58)   Lasnik and Saito suggest a different instantiation of a somewhat similar core idea:
        a. The trace of wh-movement is an indefinite (following a long tradition going back to the early 1960's).
        b. That indefinite scopally interacts with another quantifier (the <u>everyone</u> in the above examples).
        c. The scope of a quantifier is normally limited to the minimal (finite) containing clause.

(59)   For the family of questions reading of (44), then, the interaction is between the universal subject and the existential object, the former taking scope over the latter, a very typical scope interaction configuration.

(60)   Sloan's ex. (53) is also straightforward on this account. The existential, qua quantifier, is scope limited to the embedded clause, thus precluding:

(61) $Op_?$ $\forall x$ $\exists y$ | x said that Bill saw y

(62)   A standard claim:
        In [...Q1 .... [$_\alpha$... Q2 ...]]   Q2 can't take scope over Q1, where α is a finite clause..
        * Q2y Q1x [... x ... [... y ...]]

(63)   I believe that it is also true that Q1 can't (directly) take scope over Q2.
        * Q1x Q2y [... x ... [... y ...]]

(64)   Rather, in this configuration, all we actually have is:
        Q1x [... x ... [Q2y [... y ...]]

(65)   This makes sense, as it is not obvious what would block Q2 Q1 while still allowing Q1 Q2. Clause boundedness of scope would block both.

(66)   Here again, the bound pronoun loophole arises. Sloan attributes to May the observation that in (67), unlike in (53), we do get the family of questions reading, but again, only when the pronoun is bound.

(67)   Who does $everyone_i$ think he_i saw

(68)   Who did $everyone_i$ say that he_i saw

(69) $Op_?$ $\forall x$ $\exists y$ | x said that he_x saw y

(70)   Every man thinks Bill's in love with one of these women

(71)   *$\forall x$ $\exists y$ | x thinks Bill's in love with y

(72)   Every man thinks he's in love with one of these women

(73) $\forall x \: \exists y \mid x$ thinks he$_x$'s in love with y

IV. So what's going on?

(74)   Perhaps a cyclic domain that would normally be closed upon completion remains open if there is a pronoun waiting to be bound, a fairly sensible possibility, even if somewhat difficult to instantiate.

(75)   That would predict, falsely unfortunately, that a bound pronoun anywhere in the embedded clause would have the same saving effect that we have seen until now.

GAPPING
(76)   *John thinks his mother will see Susan, and Harry ~~thinks his mother will see~~ Mary

PSEUDOGAPPING
(77)   *Kathy thinks her daughter should study astronomy but she doesn't ~~think her daughter should study~~ meteorology

QUANTIFIER SCOPE INTERACTION
(78)   Every man thinks his roommate's in love with one of these women
          No scope interaction between <u>Every man</u> and <u>one of these women</u>.

ACD
(79)   John$_i$ said his$_i$ friend read everything Bill$_j$ did (read / *say his$_j$ friend read)

RECIPROCAL BINDING
(80)   John and Mary think that their parents like each other ($\neq$ J. thinks his parents like M. and M. thinks her parents like J.)

EXTRAPOSITION
(81)   *The absent-minded professor$_i$ will say that his$_i$ RA's working, if you press him, on a new molecular compound for flubber

MULTIPLE SLUICING
(82)   *Each professor$_i$ said his$_i$ RA was working on a different one of these topics, but I can't remember which on which one

(83)   Some demented version of the Specified Subject Condition??

(84)   Demented, because the original SSC (in Chomsky (1973)) only allowed a null subject to be transparent for a relation across it, and then only when it was bound by a participant in the relation.

(85)　　No rule can involve X, Y in the structure
　　　　...X...[$_\alpha$...Z...WYV...]...
　　　　where Z is the specified subject of WYV

(86)　　Z is a specified subject with respect to X if it is not 'controlled' by X or a category containing X. Control here is both the relation between what is now called PRO and its antecedent (which is currently still called Control), as in 'John tried [PRO to leave]', and also the relation between a trace and the moved item that it is the trace of. A lexical Y is not controlled at all in this sense.

(87)　　Demented also because the 'controlled by X' exemption only granted access to a **non**-finite clause. Access to finite clauses was still blocked by the Tensed Sentence Condition:

(88)　　No rule can involve X, Y in the structure
　　　　...X...[$_\alpha$...Z...WYV...]...
　　　　where α is a tensed S

(89)　　For the cases where the relevant relation <u>is</u> between X and Y, and X binds Y, the situation actually makes sense on a theory like that of Hornstein (2001) or Kayne (2002) where bound pronouns are traces of movement.

(90)　　Barrie (2005) makes just this point for multiple Sluicing (on the assumption that the multiple residues must be clause-mates).

(91)　　Scope interaction would be similar.

(92)　　As for the other phenomena discussed here:

(93)　　???

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